

REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

FIGS. 4A-4B have been corrected to include the --PRIOR ART-- label as required in the Office Action. Withdrawal of the objection is respectfully requested.

The Title of the present application is hereby replaced with --VERTICAL ALIGNMENT MODE LIQUID CRYSTAL DISPLAY DEVICE HAVING PIXEL ELECTRODE PARTIALLY COVERING HOLES OF THE INSULATING FILM--.

Withdrawal of the objection is respectfully requested.

Claims 1-10 are pending in the present application before this amendment. By the present amendment, Claims 1 and 9-10 have been amended, and Claim 11 has been added. No new matter has been added.

Claim 1 stands objected to for containing informalities. As suggested in the Office Action, "upper electrode" has been amended to --upper electrode--. Withdrawal of objection to Claim 1 is respectfully requested.

Applicants respectfully thank the Examiner for renumbering the last two claims of the listing to Claims 9 and 10, respectfully. Appropriate corrections also have been made in this paper.

Claims 1-2 and 7 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,567,144 (Kim) in view of a publication reference "39.4: A New MVA-LCD with Jagged Shaped Pixel Electrodes," SID Digest 2001, pp. 1066-1069 (Kataoka) in view of U.S. Patent No. 5,805,250 (Hatano).

In order for the Examiner to meet the initial burden of establishing the prima facie case of obviousness, all three following criteria must be met: (1) Every limitation of the claimed invention must be taught in the combination of the cited prior art references; (2) There must be a teaching or suggestion in the references themselves for the desirability of the combination; and (3) There must be a reasonable expectation of success when the teachings of the references are combined in the manner proposed in the Office Action.

Applicants respectfully submit that none of the above-required criteria has been met to establish a prima facie case of obviousness.

First, not every claimed limitation of Claim 1 is taught or suggested by the cited references, whether they are considered individually or in combination.

Applicants respectfully agree with the Examiner that Kim and Kataoka does not disclose, among others, the claimed insulating film formed on the substrate having a hole partially but not completely covered by the pixel electrode. For better clarification, Claim 1 has been amended to include: --wherein the pixel electrode partially but not completely covers the hole --, as this is clearly shown in FIGS. 5A and 5C of the present application.

Hatano in FIG. 2 shows the pixel electrode 31 **completely**--and not partially-- covering a **contact hole** 36 through the interlayer insulating layer 48.

At least for this reason, the none of the cited references whether considered alone or taken individually teaches every element of Claim 1.

Second, Hatano's structure as shown in FIG. 2 is a well-known structure of forming a **contact hole** for the purposes of providing an electrical contact between the

pixel electrode 31 and the drain electrode 46b of the TFT 34. This contact hole 36 shown in Hatano or any contact hole of this type utilized in any other semiconductor display applications is not designed to have an effect--and thus providing **no** effect--on the electrical field formation in the liquid crystal layer, which will influence the orientation of the liquid crystals in the liquid crystal layer. There is no reasonable motivation or suggestion found in the Hatano reference that its contact hole 36 would have any influence on the liquid crystals, unlike the claimed holes such as FIG. 5C, element 54, affecting the orientation of the liquid crystals 58.

The suggestion or motivation to combine references must come from the cited prior art references, either explicitly or implicitly. The mere fact that the teachings of the prior art **can** be modified or combined does **not** establish a motivation or suggestion to combine and make the resultant combination prima facie obvious. **The prior art must suggest the desirability of the combination.** MPEP §2143.01. Therefore, for this reasons, it is respectfully submitted that it would be improper to combine Hatano because Hatano (disclosing the well-known conventional "contact hole" having the completely different functionality than the claimed invention) does not provide the sufficient **basis for the desirability of the combination.** Applicants respectfully submit that any hindsight reasoning based on the teachings of the present application, which is not based on the prior art teachings, is prohibited.

Third, in absence of any teachings or suggestion in Hatano that its conventional contact hole 36 can influence the liquid crystal orientation, any attempt to utilize the Hatano's structure (alone or in combination with teachings of other references) will inevitably fail to produce results of the claimed invention. According to MPEP §2143.02,

there must be a reasonable degree of predictability of success of the proposed modification or combination of the prior art in order to establish prima facie obviousness. This burden of proof is initially born by the Examiner, but the Office Action fails to provide this.

For the reasons above, Applicants respectfully submit that the prima facie case of obviousness has not been established and accordingly and respectfully request withdrawal of the rejections based on 35 U.S.C. § 103. An indication of allowance of Claim 1 is respectfully requested.

For the reasons set forth above, Applicants respectfully submit that Claims 1-11, now pending in this application, are in condition for allowance over the cited references. This amendment is considered to be responsive to all points raised in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections and earnestly solicit an indication of allowable subject matter. Should the Examiner have any remaining questions or concerns, the Examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,



Dated: January 14, 2005

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APPENDIX OF ATTACHMENTS

Application Serial No. 10/602,957
Reply to Office Action of September 22, 2004

**Replacement Sheet of FIGS. 4A-4B
(a total of ONE sheet of drawing)**

Amendments To The Drawings:

The attached ONE sheet of drawings include changes to FIGS. 4A-4B. This sheet contains corrections shown in red for the Examiner's approval and are requested to replace the original sheet of FIGS. 4A-4B.

Attachment: Replacement Sheets of FIGS. 4A-4B